

## GENERAL NOTES : CABLING

**PROJECT : BRAHMAPUTRA  
PETROCHEMICAL COMPLEX**

**CLIENT : M/s BRAMHAPUTRA CRACKER  
& POLYMER LIMITED**

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| Rev.<br>No | Date     | Purpose                 | Prepared<br>by | Checked<br>by | Approved<br>by |

### **GENERAL NOTES: CABLING**

1. The cabling system shall be executed in accordance with the requirements laid down in EIL Standard Specification for Cable Installation (6-51-0082), respective installation standards, applicable BIS codes & standards, IE Rules and other statutory regulations, specific job requirement indicated in this document and the respective cable layout drawings.
2. In case of any contradiction between various referred standards / documents / statutory regulations the following order of priority shall govern
  - Statutory regulations
  - Cable layout drawing(s)
  - This specification
  - Installation standards
  - Standard specification
  - Codes and standardsHowever, concurrence of Engineer-in Charge shall always be obtained, before taking a decision in any such matter.
3. All ladder type cable trays shall be supported at 3.0 m intervals along straight run.
4. Electrical contractor shall provide cable tray supports (both vertical and horizontal) inside the substation cellar. Vertical supports shall be welded to MS insert plates provided by structural contractor. Wherever these insert plates are not available, electrical contractor shall provide required insert plates using anchor fasteners.
5. Cable tray supports as required for vertical dropper / horizontal bend etc. shall be decided at site. Electrical contractor shall provide these supports by making use of steel members/ supports or by using anchor fasteners.
6. In general, HV cables and MV Power & control cables shall be laid in separate trays respectively, unless otherwise indicated in the drawing. Wherever HV & MV cables are laid in the same tray, suitable barrier plates shall be provided between HV & MV cables.
7. All cables for Fire Water System shall be directly buried in trenches.
8. All vertical cable trays shall be suitably covered with 20-gauge G.I. sheet. In areas where several tiers of cable trays are dropping down, only the outermost vertical tray shall be covered with G.I. sheet.
9. Cable Trays installed on elevated pipe racks carrying hydrocarbons, shall be provided with 20-gauge GI sheet below the bottommost tier of cable tray. In general cable trays shall not be installed below the acid / alkali / hydrocarbon piping. In exceptional cases such as for air fin coolers, 20-gauge GI Sheet shall be provided above the topmost cable tray.
10. At any particular location, all vertical outside/inside bends shall have uniform bending radius of 1000 mm (unless otherwise specified).
11. Electrical cable layout drawing gives indicative route of trays / trenches. For exact coordinates, of these, Piping / General Civil area drawings of respective area shall be referred.

12. Unless otherwise specified, tray levels given in the drawing shall correspond to the bottom level of tray.
13. Exact termination / layout of GI pipes, provided for routing of cables, shall be suitably decided at site considering location of terminal block of the respective electrical equipment.
14. After completion of laying of cables, all cable/cable tray entries in substation/other buildings (except process control room/rack rooms) shall be suitably sealed to prevent water entry and entry of rodents/creepers. MCTs shall be provided for cable entries to process control room/rack rooms and shall have 20 % spare provision for future use.
15. Fire barriers/flammage retardant paint shall be deployed at locations where cable trays enter/exit the substation above ground.
16. Jointing of prefabricated ladder type cable trays and their fittings shall be done by using splice plates. Splice plates shall be provided, one on inside face and one on outside face, of each side runner of cable tray, at each joint.
17. Uncovered left over cut out behind panels shall be filled with RCC by electrical contractor. However cutouts on both sides of panels (for future use) shall be covered by 6.0 mm thick chequered plates.
18. All cable trays shall be tack welded with structural supports and welded surfaces shall be painted with galvanizing paint by electrical contractor.
19. No power cables shall be routed through the Main Control Room except the supply cables used for DCS / PLC system.
20. The armour and semiconductor screen of single core cables shall be earthed at one end. The continuity of armour and semiconductor screen shall be broken at each joint.